

### AMENDMENTS TO THE CLAIMS

1. (Canceled)
2. (Canceled)
3. (Currently Amended) A method of producing ~~the solid an~~ electrolyte according to ~~claim 1, comprising forming a phase separated structure by increasing, in view of a relationship between a mass ratio of an amount of electrolyte solution/crosslinked polymer and a crosslink density, the crosslink density or the mass ratio of electrolyte solution/crosslinked polymer, to be in or over a range in which the electrolyte can be contained in a polymer chain~~comprising:  
combining an amount of electrolyte solution and an amount of monomer; and  
crosslinking the monomer in the presence of the electrolyte such that a first portion of the electrolyte solution forms a gel with the crosslinked polymer and a second portion of the electrolyte forms a separated phase of liquid electrolyte solution.
4. (Original) The method according to claim 3, wherein in the phase-separated structure, the electrolyte solution phase has a size of less than 20  $\mu\text{m}$ .
5. (Original) The method according to claim 3, wherein the degree of crosslinking of the crosslinked polymer is controlled by a combination of a low molecular weight compound having a single reaction point and a low molecular weight compound, which functions as a crosslinking agent, having two or more reaction points.
6. (Original) The method according to claim 5, wherein a homopolymer of the low molecular weight compound having a single reaction point contains a low molecular weight compound that is soluble in the electrolyte solution.
7. (Original) The method according to claim 5, wherein a (meth)acrylate monomer as the polymerizable low molecular weight compound is used.
8. (Original) The method according to claim 5, wherein ethylene dimethacrylate as the low molecular weight compound functioning as crosslinking agent is included.
9. (Currently Amended) The method according to claim 3, wherein the ~~solid~~ electrolyte is prepared, by dissolving a low molecular weight compound that is polymerizable ~~by using heat, an optical polymerization initiator or the like~~ in the electrolyte solution in advance, and subjecting the resultant solution to polymerization reaction to form a crosslinked polymer.

10. (Original) The method according to claim 9, wherein the degree of crosslinking of the crosslinked polymer is controlled by a combination of a low molecular weight compound having a single reaction point and a low molecular weight compound, which functions as a crosslinking agent, having two or more reaction points.

11. (Original) The method according to claim 10, wherein a homopolymer of the low molecular weight compound having a single reaction point contains a low molecular weight compound that is soluble in the electrolyte solution.

12. (Original) The method according to claim 9, wherein a (meth)acrylate monomer as the polymerizable low molecular weight compound is used.

13. (Original) The method according to claim 10, wherein ethylene dimethacrylate as the low molecular weight compound functioning as the crosslinking agent is included.

14. (Canceled)

15. (Canceled)

16. (Currently Amended) A method of producing a nonaqueous secondary battery, comprising the steps of: assembling a negative electrode, a positive electrode and a separator into a final battery form, and performing the method of producing the solid electrolyte according to claim 3.

17. (Currently Amended) The method according to claim 16, wherein in the step of performing the method of producing the solid electrolyte, the solid electrolyte is prepared, by dissolving a low molecular weight compound that is polymerizable ~~by using heat, an optical polymerization initiator or the like~~ in the electrolyte solution in advance, and subjecting the resultant solution to polymerization reaction to form a crosslinked polymer.

18. (Original) The method according to claim 17, wherein the degree of crosslinking of the crosslinked polymer is controlled by a combination of a low molecular weight compound having a single reaction point and a low molecular weight compound, which functions as a crosslinking agent, having two or more reaction points.

19. (Original) The method according to claim 18, wherein a homopolymer of the low molecular weight compound having a single reaction point contains a low molecular weight compound that is soluble in the electrolyte solution.

**Appl. No.** : 10/025,324  
**Filed** : December 18, 2001

20. (Original) The method according to claim 17, wherein a (meth)acrylate monomer as the polymerizable low molecular weight compound is used.

21. (Original) The method according to claim 18, wherein ethylene dimethacrylate as the low molecular weight compound functioning as crosslinking agent is included.

22. (New) An electrolyte made by the method of:  
combining an amount of electrolyte solution and an amount of monomer; and  
crosslinking the monomer in the presence of the electrolyte such that a first  
portion of the electrolyte solution forms a gel with the crosslinked polymer and a second  
portion of the electrolyte forms a separated phase of liquid electrolyte solution.